

CLAIMS:

1. A method for producing electronic video signals representative of a focused moveable image, comprising the steps of:

providing a charge coupled device, masking substantially less than half of the lines of said device to form a masked storage area and a substantially larger unmasked sensing area;

disposing said sensing area in the path of said image; providing a shutter for periodically blocking said image from said sensing area; and

providing clocking signals to said device to shift sensed lines of said image from said sensing area to said storage area and to clock image representative electronic video signals out of said device.

2. The method as defined by claim 1, wherein said step of providing clocking signals to said device includes providing a first vertical clock, a second vertical clock, and a pixel rate clock.

3. The method as defined by claim 2, wherein said first vertical clock is operative to shift lines in the sensing area

and said second vertical clock is operative to shift lines in the storage area.

4. The method as defined by claim 1, wherein said substantially larger unmasked sensing area includes at least 55 percent of the lines of said device.

5. The method as defined by claim 3, wherein said substantially larger unmasked sensing area includes at least 55 percent of the lines of said device.

6. The method as defined by claim 3, wherein, during a vertical blanking period after shutter closure, lines are shifted from the sensing area to fill the storage area using said first and second vertical clocks at relatively high speed and during the remainder of said shutter closure time further lines are shifted from the sensing area to the storage area and lines are shifted through the storage area and read out using said first and second vertical clocks at relatively low speed, and after shutter opening, lines in the storage area are read out using said second clock at a relatively low speed.

7. The method as defined by claim 5, wherein, during a vertical blanking period after shutter closure, lines are shifted from the sensing area to fill the storage area using said first

and second vertical clocks at relatively high speed and during the remainder of said shutter closure time further lines are shifted from the sensing area to the storage area and lines are shifted through the storage area and read out using said first and second vertical clocks at relatively low speed, and after shutter opening, lines in the storage area are read out using said second clock at a relatively low speed.

8. The method as defined by claim 6, wherein said pixel clock is operative to clock pixels out of the last line of said storage area.

9. The method as defined by claim 7, wherein said pixel clock is operative to clock pixels out of the last line of said storage area.

10. Apparatus for producing electronic video signals representative of a focused moveable image, comprising:

a charge coupled device, substantially less than half of the lines of said device being masked to form a masked storage area and a substantially larger unmasked sensing area;

said sensing area being disposed in the path of said image;

a shutter for periodically blocking said image from said sensing area; and

means for producing clocking signals coupled with said device for shifting sensed lines of said image from said sensing area to said storage area and for clocking image representative electronic video signals out of said device.

11. Apparatus as defined by claim 10, wherein said means for producing clocking signals includes means for producing a first vertical clock, a second vertical clock, and a pixel rate clock.

12. Apparatus as defined by claim 11, wherein said first vertical clock is operative to shift lines in the sensing area and said second vertical clock is operative to shift lines in the storage area.

13. Apparatus as defined by claim 10, wherein said substantially larger unmasked sensing area includes at least 55 percent of the lines of said device.

14. Apparatus as defined by claim 12, wherein said substantially larger unmasked sensing area includes at least 55 percent of the lines of said device.